

# AMENDMENTS TO THE CLAIMS

Claim 1 (currently amended). 1. A fusion protein of the structure



having essentially the same biological specificity and activity of human TPO, comprising an immunoglobulin heavy chain constant region (F) and a human TPO molecule (M) in a truncated (1 - 174) form modified by one or more amino acid substitutions, wherein said fusion protein is substantially non-immunogenic or less immunogenic than the parental fusion protein comprising the non-modified human TPO, and said amino acid substitutions ~~have been carried out~~ are in one or more of the sequence tracks

- (i) GEWKTQMEETKAQDILGAVTLLEGVM (SEQ ID NO: 2), and
- (ii) PTTAVPSRTSLVLTL (SEQ ID NO: 3);

within the truncated wild-type TPO molecule, which eliminate and cause a reduction or an elimination of one or more of T-cell epitopes within the TPO molecule, which act in the parental non-modified fusion molecule as MHC class II binding ligands and stimulate T-cells, wherein said immunoglobulin heavy chain constant region is fused directly ( $n = 0$ ) or indirectly ( $n = 1$ ) via a linker molecule (L) to said modified human TPO molecule (M).

Claim 2 (original). A fusion protein according to claim 1, wherein F is an Fc domain.

Claims 3-15 (cancelled).

Claim 16 (new). A polypeptide comprising the amino acid residue sequence:

SPAPPACDLRVLSKLLRDSHVLHSRLSQCEVHPLPTPVLLPAVDFSLGX<sup>1</sup>X<sup>2</sup>KTX<sup>3</sup>EEX<sup>4</sup>KX<sup>4</sup>X<sup>6</sup>D  
X<sup>7</sup>LGAX<sup>8</sup>TX<sup>9</sup>LX<sup>10</sup>X<sup>11</sup>GVMAARGQLGPTCLSSLLGQLSGQVRLLLGALQSLGTLPQGRRTAHKDPN  
AIFLSFQHLLRGKVRFLMLVGGSTLCVRRAPPTAX<sup>12</sup>X<sup>13</sup>SRTSLVLTLNEL (SEQ ID NO: 1), wherein  
X<sup>1</sup> is A or E;  
X<sup>2</sup> is S or W;  
X<sup>3</sup> is A, T, K, S or M;  
X<sup>4</sup> is A or T;

$X^5$  is R or A;

$X^6$  is A, T, or Q;

$X^7$  is A, T, or I;

$X^8$  is A, T, or V;

$X^9$  is A, T, S, or L;

$X^{10}$  is A or L;

$X^{11}$  is A, S, or E;

$X^{12}$  is N, A, T, R, E, D, G, H, P, K, Q, or V;

$X^{13}$  is A or P;

excluding the polypeptide in which simultaneously  $X^1 = E$ ,  $X^2 = W$ ,  $X^3 = M$ ,  $X^4 = T$ ,  $X^5 = A$ ,  $X^6 = Q$ ,  $X^7 = I$ ,  $X^8 = V$ ,  $X^9 = L$ ,  $X^{10} = L$ ,  $X^{11} = E$ ,  $X^{12} = V$  and  $X^{13} = P$ .

Claim 17 (new). A fusion protein comprising a polypeptide of claim 16 linked at the N-terminus thereof to a human immunoglobulin Fc region peptide.

Claim 18 (new). The fusion protein of claim 17 wherein the Fc region peptide is linked to the N-terminus of the polypeptide by a linking peptide having the amino acid residue sequence of SEQ ID NO: 5.

Claim 19 (new). The fusion protein of claim 17 wherein the Fc region peptide is a human IgG4 Fc region peptide.

Claim 20 (new). The fusion protein of claim 19 wherein the human IgG4 Fc region peptide is linked to the N-terminus of the polypeptide by a linking peptide having the amino acid residue sequence of SEQ ID NO: 5.

Claim 21 (new). The fusion protein of claim 17 wherein the Fc region peptide has the amino acid residue sequence of SEQ ID NO: 73.

Claim 22 (new). The fusion protein of claim 21 wherein the Fc region peptide is linked to the N-terminus of the polypeptide by a linking peptide having the amino acid residue sequence of SEQ ID NO: 5.

Claim 23 (new). A polypeptide comprising an amino acid residue sequence selected from the group consisting of SEQ ID NO: 6 through SEQ ID NO: 72, inclusive.

Claim 24 (new). A fusion protein comprising a polypeptide of claim 23 linked at the N-terminus thereof to a human immunoglobulin Fc region peptide.

Claim 25 (new). The fusion protein of claim 24 wherein the Fc region peptide is linked to the N-terminus of the polypeptide by a linking peptide having the amino acid residue sequence of SEQ ID NO: 5.

Claim 26 (new). The fusion protein of claim 24 wherein the Fc region peptide is a human IgG4 Fc region peptide.

Claim 27 (new). The fusion protein of claim 26 wherein the human IgG4 Fc region peptide is linked to the N-terminus of the polypeptide by a linking peptide having the amino acid residue sequence of SEQ ID NO: 5.

Claim 28 (new). The fusion protein of claim 24 wherein the Fc region peptide has the amino acid residue sequence of SEQ ID NO: 73.

Claim 29 (new). The fusion protein of claim 28 wherein the Fc region peptide is linked to the N-terminus of the polypeptide by a linking peptide having the amino acid residue sequence of SEQ ID NO: 5.

Claim 30 (new). A dimeric fusion protein consisting of two identical fusion proteins of claim 17 bound together.

Claim 31 (new). A dimeric fusion protein consisting of two identical fusion proteins of claim 24 bound together.

Claim 32 (new). A fusion protein comprising a polypeptide linked at the N-terminus thereof to a human Fc region peptide, the polypeptide comprising the amino acid sequence of SEQ ID NO: 4 and including one or more amino acid residue substitutions in SEQ ID NO: 4 selected from the group consisting of M55K, A60R, and V161A.

Claim 33 (new). An isolated peptide molecule consisting of an amino acid sequence selected from the group consisting of SEQ ID NO: 2, SEQ ID NO: 3, and a sequence consisting of at least 9 consecutive amino acid residues of SEQ ID NO: 2 or SEQ ID NO: 3 having a MHC class II binding activity characterized by a stimulation index of  $> 1.8$  in a biological assay of cellular proliferation, wherein the stimulation index is the value of cellular proliferation scored following stimulation by the peptide, divided by the value of cellular proliferation scored in control cells not exposed to the peptide.